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SHORT REPORT

Traumatic Pseudoaneurysm of the Internal Maxillary Artery

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Traumatic pseudoaneurysm of the internal maxillary artery (IMA) is rare. A patient with a pseudoaneurysm of IMA presented with a pulsatile swelling in the parotid region. Endovascular coils were deployed at neck of aneurysm and it was thrombosed. Pseudoaneurysms of IMA are difficult to approach surgically. Endovascular therapies can give early recovery with minimal morbidity and avoids injury to the facial nerve and its branches.

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Keywords: Pseudoaneurysm; Fibered coils; Internal maxillary artery (IMA).

Introduction

Pseudoaneurysms are caused by rupture of arteries with extravasation of blood. The compressed perivascular tissue forms the wall of aneurysmal sac. This sac gradually expands and can rupture. It is rare to see pseudoaneurysms of IMA. They are usually associated with fracture neck of the mandible. IMA aneurysms can occur in any part of its course, but it is very rare to see pseudoaneurysms in the first, mandibular segment of the internal maxillary artery without fracture neck of the mandible but with fracture of the body of mandible and maxilla. We describe the management of traumatic internal maxillary artery pseudoaneurysm.

Case Report

A twenty four years old driver fell from a moving heavy vehicle and injured his face. The plastic surgeon fixed fractures of mandible and left maxilla with arch bar and dental wires. After 15 days a pulsatile swelling was noted in the right parotid region

with clear fluid discharge from the right ear. He received broad spectrum antibiotics. He was not able to open the mouth due to pain. Orthopantogram showed intact fixation of fractured bones. MR Angiogram (Fig. 1), Digital subtraction angiogram (Fig. 2) showed a large pseudoaneurysm arising at the junction of IMA and superficial temporal artery. There were no communications from the opposite side. Two fibered coils were deployed at the neck of pseudoaneurysm (Fig. 2). The abnormal pulsations

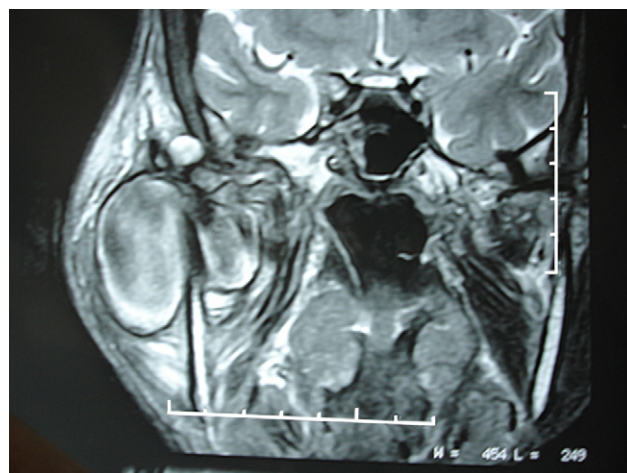


Fig. 1. MRI showing pseudoaneurysm of Internal maxillary artery.

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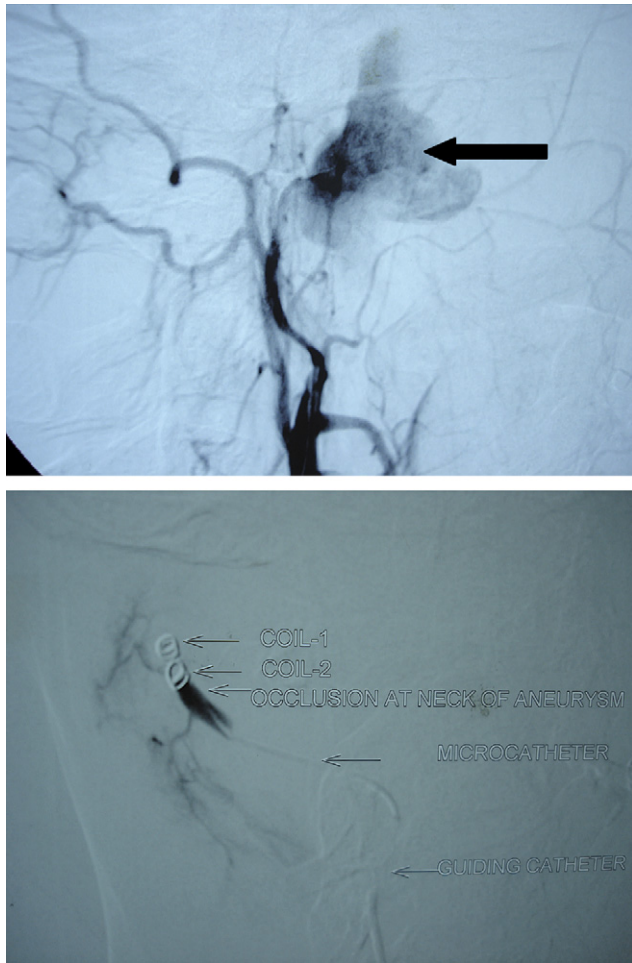


Fig. 2. Angiogram showing Pseudoaneurysm of Internal Maxillary Artery before after placement of the two coils at the neck of the Aneurysm.

disappeared and pain subsided. The aneurysm was thrombosed. Post procedure recovery was uneventful.

Discussion

There are sporadic publications on the management of IMA aneurysms.¹⁻³ These can be due to trauma, facial fractures, needle aspirations, mandibular osteotomies and infections. Some patients with cancers after radiation therapy to face develop IMA aneurysms. They can present as a painful, pulsatile swelling in the parotid region with facial nerve palsy, epistaxis and oral or throat bleeding depending on the segment of IMA involved. In our patient the swelling was noted 15 days after fixation of facial fractures. Duplex scan, MR angiography, Spiral CT angiography and Digital Subtraction Angiography have been used in the diagnosis. Endovascular Therapies (coils, glues) are preferred methods of treatments with minimal morbidity and they also maintain patency of internal maxillary artery in some cases.^{4,5} Surgical approaches are more traumatic and facial nerve can be injured. When endovascular methods fail, surgery can be considered.

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